EXHIBIT J

Analysis of Infringement of U.S. Patent No. 6,725,402 by Silicon Laboratories, Inc.
(Based on Public Information Only)

Plaintiff Ocean Semiconductor LLC ("Ocean Semiconductor"), provides this preliminary and exemplary infringement analysis with respect to infringement of U.S. Patent No. 6,725,402, entitled "METHOD AND APPARATUS FOR FAULT DETECTION OF A PROCESSING TOOL AND CONTROL THEREOF USING AN ADVANCED PROCESS CONTROL (APC) FRAMEWORK" (the "'402 patent") by Silicon Laboratories, Inc. ("SILABS"). The following chart illustrates an exemplary analysis regarding infringement by Defendant SILABS' semiconductor products, systems, devices, components, and integrated circuits, and products containing such circuits, fabricated or manufactured using PDF Solutions, Inc.'s ("PDF Solutions") platforms, and/or framework, including PDF Solutions' software and APC system, including the Exensio platform hardware and/or software (collectively, "Exensio") and/or other APC system and platform hardware and/or software. Such products include, without limitation, wireless products (e.g., EFR32XG2X family), internet of things products (e.g., EFM8BB10F8G-QFN20, EFM8BB10F2A-QFN20, EFM8BB10F2G-QFN20, EFM8BB10F2I-QFN20, EFM8BB10F4A-QFN20, EFM8BB10F4G-QFN20, EFM8BB10F4I-QFN20, EFM8BB10F8A-QFN20, EFM8BB10F8G-QSOP24, EFM8BB10F8G-SOIC16, EFM8BB10F8I-QFN20, EFM8BB10F8I-QSOP24, EFM8BB10F8I-SOIC16, EFM8BB21F16A-QFN20, EFM8BB21F16G-QFN20, EFM8BB21F16G-QSOP24, EFM8BB21F16I-QFN20, EFM8BB21F16I-QSOP24, EFM8BB22F16A-QFN28, EFM8BB22F16G-QFN28, EFM8BB22F16I-QFN28, EFM8BB31F16A-4QFN24, EFM8BB31F16A-5QFN32, EFM8BB31F16G-QFN24, EFM8BB31F16G-QFN32, EFM8BB31F16G-QFP32, EFM8BB31F16G-QSOP24, EFM8BB31F16I-4QFN24, EFM8BB31F16I-5QFN32, EFM8BB31F16I-QFN24, EFM8BB31F16I-QFN32, EFM8BB31F16I-QFP32, EFM8BB31F16I-QSOP24, EFM8BB31F32A-4QFN24, EFM8BB31F32A-5QFN32, EFM8BB31F32G-QFN24, EFM8BB31F32G-QFN32, EFM8BB31F32G-QFP32, EFM8BB31F32G-QSOP24, EFM8BB31F32I-4QFN24, EFM8BB31F32I-5QFN32, EFM8BB31F32I-QFN24, EFM8BB31F32I-QFN32, EFM8BB31F32I-QFP32, EFM8BB31F32I-QSOP24, EFM8BB31F64A-4QFN24, EFM8BB31F64A-5QFN32, EFM8BB31F64G-QFN24, EFM8BB31F64G-QFN32, EFM8BB31F64G-QFP32, EFM8BB31F64G-QSOP24, EFM8BB31F64I-4QFN24, EFM8BB31F64I-5QFN32, EFM8BB31F64I-QFN24, EFM8BB31F64I-QFN32, EFM8BB31F64I-QFP32, EFM8BB31F64I-QSOP24), infrastructure products (e.g., Si5332A-GM1, Si5332A-GM2, Si5332A-GM3, Si5332B-GM1, Si5332B-GM2, Si5332B-GM3, Si5332C-GM1, Si5332C-GM2, Si5332C-GM3, Si5332D-GM1, Si5332D-GM2, Si5332D-GM3, Si5332E-GM1, Si5332E-GM2, Si5332E-GM3, Si5332F-GM1, Si5332F-GM2, Si5332F-GM3, Si5332G-GM1, Si5332G-GM2, Si5332G-GM3, Si5332H-GM1, Si5332H-GM2, Si5332H-GM3, Si5332A-GM1, Si5332A-GM2, Si5332A-GM3, Si5332B-GM1, Si5332B-GM2, Si5332B-GM3, Si5332C-GM1, Si5332C-GM2, Si5332C-GM3, Si5332D-GM1, Si5332D-GM2, Si5332D-GM3, Si5332E-GM1, Si5332E-GM2, Si5332E-GM3, Si5332F-GM1, Si5332F-GM2, Si5332F-GM3, Si5332G-GM1, Si5332G-GM2, Si5332G-GM3, Si5332H-GM1, Si5332H-GM2, Si5332H-GM3), broadcast products (e.g., Si2160, Si2162, Si2164, Si2180, Si2181, Si2182, Si2183), access products (e.g., Si3000, Si3402-GM, Si3404-GM, Si3406-GM, Si34062-GM, Si3462-GM, Si3471A-IM, microcontrollers (e.g., Tiny Gecko series, EFM8 Busy Bee), buffers (e.g., Si5330x), oscillators (e.g., Si54x), clock generators (e.g., Si534x), jitter attenuators (e.g., Si539x), synchronous ethernet (e.g., Si5383/48/88), isolation products (e.g., Si86xx, Si87xx, Si88xx, Si823x, Si827x, Si828x, Si823Hx, Si890x, Si892x, Si82Hx, Si838x, Si834x, and Si875x), interface products (e.g., ethernet controllers, LC controllers, bridges), timing products (e.g., buffers, clock generators, oscillators, and network synchronizers), sensors (e.g., humidity, magnetic, optical, temperature, and biometric), audio & radio products (e.g., automotive tuners, and radios), power products (e.g., power management ICs, powered drivers, and PSE controllers), TV & video products (e.g., digital demodulators and TV

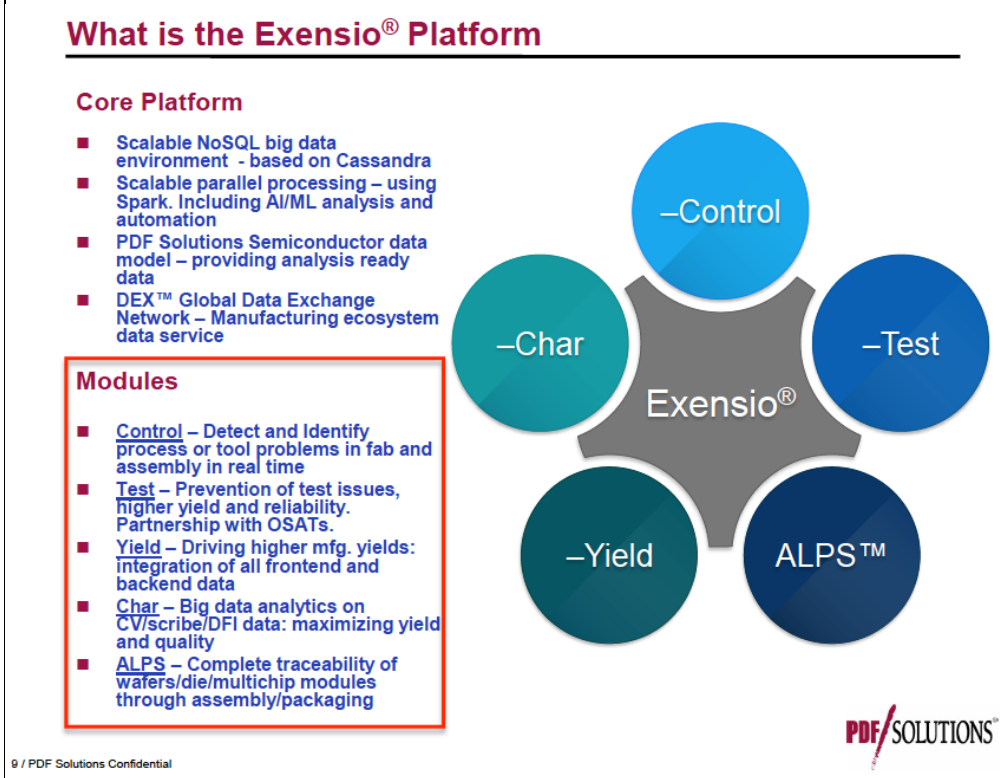
tuners), modem & DAA products (e.g., voice modems), voice products (e.g., codec, proSLICs, and DAA), power over ethernet devices (e.g., power source equipment and powered device ICs)), and similar systems, products, devices, and integrated circuits (collectively, the "'402 Infringing Instrumentalities").

The analysis set forth below is based only upon information from publicly available resources regarding the '402 Infringing Instrumentalities, as SILABS has not yet provided any non-public information.

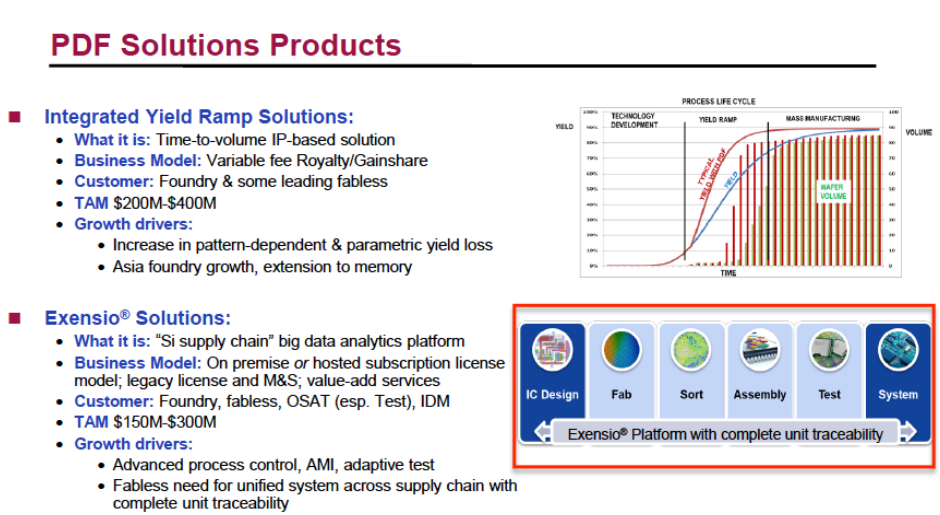
Unless otherwise noted, Ocean Semiconductor contends that SILABS directly infringes the '402 patent in violation of 35 U.S.C. § 271(g) by using, selling, and/or offering to sell in the United States, and/or importing into the United States, the '402 Infringing Instrumentalities. The following exemplary analysis demonstrates that infringement. Unless otherwise noted, Ocean Semiconductor further contends that the evidence below supports a finding of indirect infringement under 35 U.S.C. § 271(b) in conjunction with other evidence of liability.

Unless otherwise noted, Ocean Semiconductor believes and contends that each element of each claim asserted herein is literally met through SILABS' provision or importation of the '402 Infringing Instrumentalities. However, to the extent that SILABS attempts to allege that any asserted claim element is not literally met, Ocean Semiconductor believes and contends that such elements are met under the doctrine of equivalents. More specifically, in its investigation and analysis of the '402 Infringing Instrumentalities, Ocean Semiconductor did not identify any substantial differences between the elements of the patent claims and the corresponding features of the Infringing Instrumentalities, as set forth herein. In each instance, the identified feature of the '402 Infringing Instrumentalities performs at least substantially the same function in substantially the same way to achieve substantially the same result as the corresponding claim element.

Ocean Semiconductor notes that the present claim chart and analysis are necessarily preliminary in that Ocean Semiconductor has not obtained substantial discovery from SILABS nor has SILABS disclosed any detailed analysis for its non-infringement position, if any. Further, Ocean Semiconductor does not have the benefit of claim construction or expert discovery. Ocean Semiconductor reserves the right to supplement and/or amend the positions taken in this preliminary and exemplary infringement analysis, including with respect to literal infringement and infringement under the doctrine of equivalents, if and when warranted by further information obtained by Ocean Semiconductor, including but not limited to information adduced through information exchanges between the parties, fact discovery, claim construction, expert discovery, and/or further analysis.

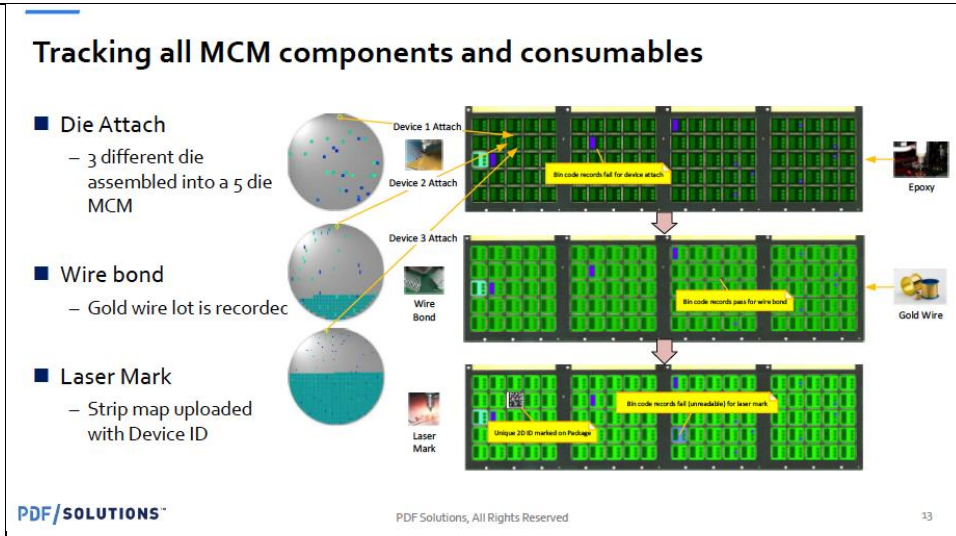
USP No. 6,725,402	Infringement by the '402 Accused Instrumentalities
1. A method comprising: receiving at a first interface operational state data of a processing tool related to the manufacture of a processing piece;	PDF Solutions Inc.'s ("PDF") Exensio platform ("Exensio System") receives at a first interface operational state data of a processing tool related to the manufacture of a processing piece. For example, the Exensio System includes a first interface (e.g., platform modules including the control module (to detect and identify process or tool problems in fab and assembly in real time), the char module (to provide big data analytics on processing tools), and the ALPS module (to trace wafers, dies, and multichip modules)):  *See* PDF Solutions, Inc. Overview Jefferies Conferences (Aug. 28-29, 2018) at 9, *available at* https://www.pdf.com/upload/File/Investors/PDFExecOveriew2018II.pdf (last visited Oct. 12, 2020) ("PDF Overview") (annotated).

The operational state data of a processing tool related to the manufacture of a processing piece received at the first interface can include data from integrated circuit design, fabrication, and sorting to assembly, testing, and system control:



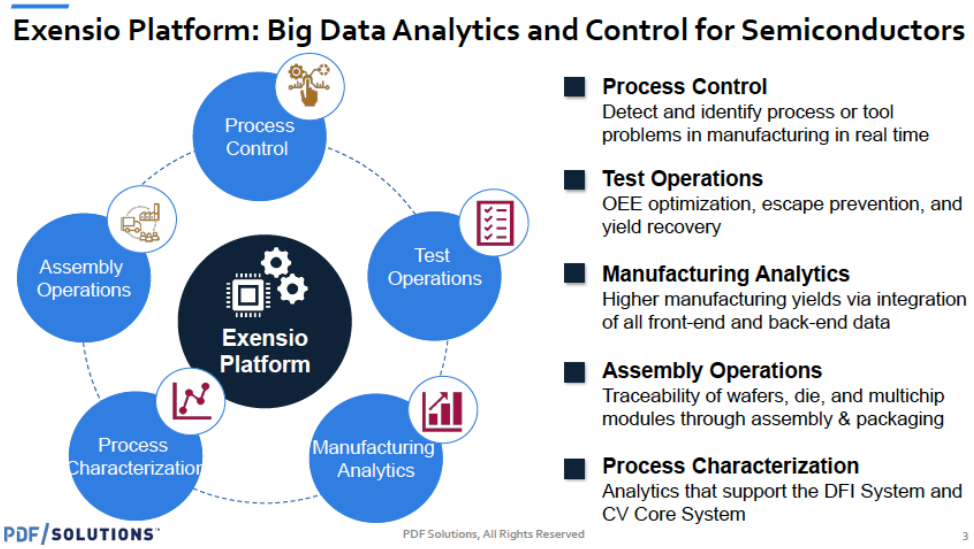
See PDF Solutions, Inc. Overview Jefferies Conferences (Aug. 28-29, 2018) at 5, *available at* https://www.pdf.com/upload/File/Investors/PDFExecOveriew2018II.pdf (last visited Oct. 12, 2020) ("PDF Overview") (annotated).

The operational state data of a processing tool related to the manufacture of a processing piece received at the first interface can also include data associated with multi-chip module ("MCM") components and consumables that identify where a particular die is in a package, whether a particular die is wire-bonded or laser-marked, and what the device ID is for a particular chipset, etc.:



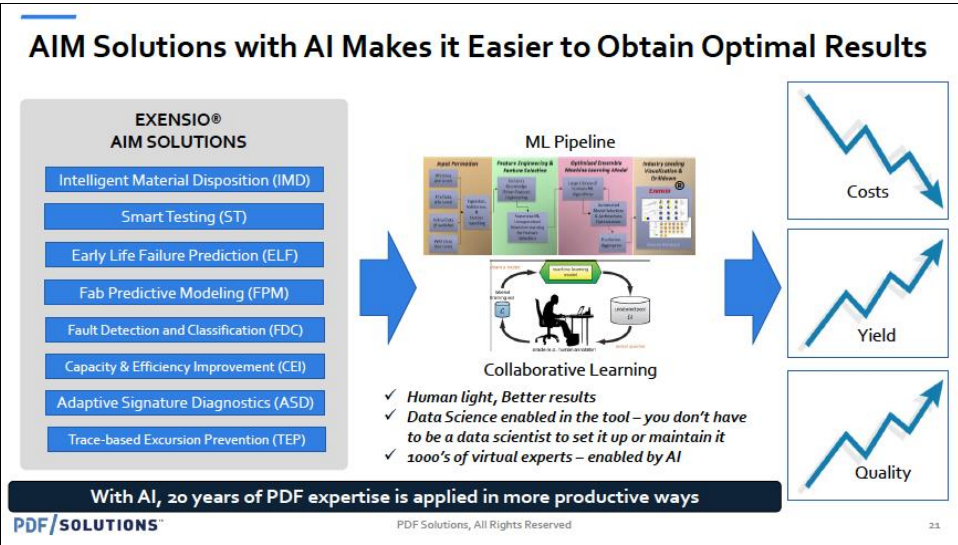
See PDF Solutions, "Cognitive End to End Analytics for Semiconductor Manufacturing: A Smart Testing Application" (Oct. 30, 2019) at 13, *available at* http://liralingerie.com/nldfpd/end-to-end-analytics.html (last visited Oct. 12, 2020) ("Cognitive End to End Analytics Presentation").

The operational state data can cover process control, test operations, manufacturing analytics, assembly operations, and process characterization:



See S1.2—Exensio Platform, 16th Annual PDF Solutions Users Conference (Oct. 15, 2019) at 3, *available at* http://www.pdf.com/upload/File/Investors/PUG2019/S1.2%20PUG2019_ExensioPlatform_SaidAkar.pdf ("S1.2—Exensio Platform Presentation") (last visited Oct. 12, 2020) (annotated).

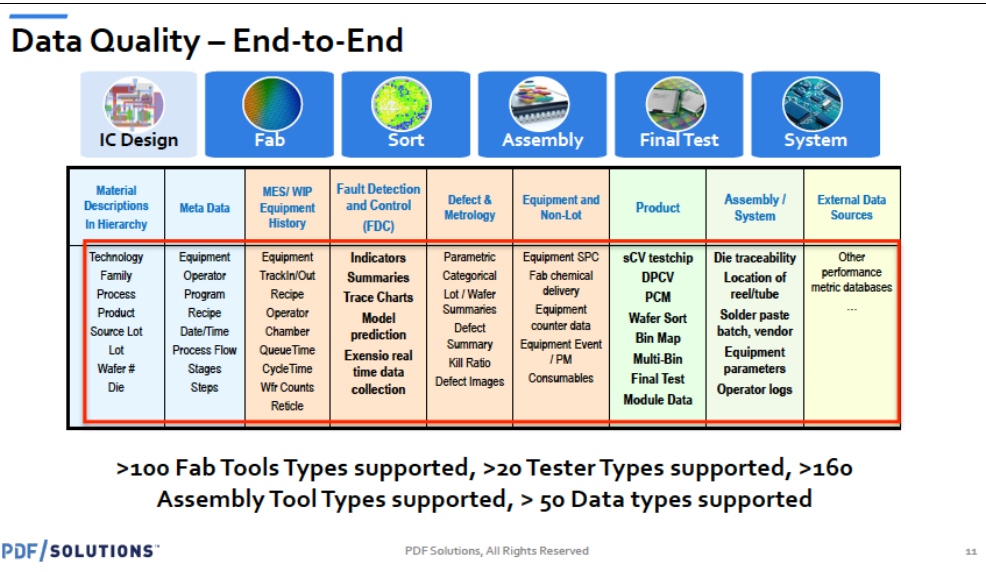
The operational state data can also include data associated with the rule ensemble engine, spatial signature analysis, fail signature detection and analysis, product sensitivity analysis, parameter screening report, indicator screening report, and automatic spatial classification, all of which are related to the manufacture of a processing piece:



See S1.3— Machine Learning in Exensio, 16th Annual PDF Solutions Users Conference (Oct. 15, 2019) at 21, *available at* http://www.pdf.com/upload/File/Investors/PUG2019/S1.3%20PUG2019_AISolutions_JeffDavid.pdf ("S1.3—Machine Learning in Exensio") (last visited Oct. 12, 2020).

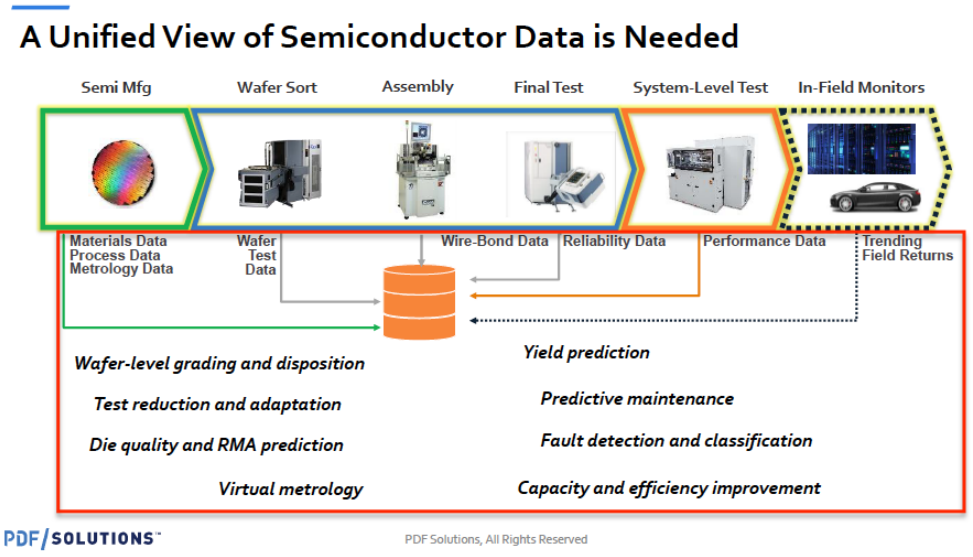
The operational state data of a processing tool related to the manufacture of a processing piece can also include the following:

- Material descriptions (e.g., lot #, wafer #, die);
- Meta data (e.g., recipe data/time, process flow, stages, and steps);
- Fault detection and control (e.g., trace charts, model prediction, real time data collection on defects);
- Defect & metrology (e.g., lot/wafer summaries, defect summary, kill ratio, and defect images); and
- Assembly system (e.g., location of reel/tube, die traceability, and equipment parameters):

	 *See* S1.2—Exensio Platform Presentation at 11 (annotated).
sending the state data from the first interface to a fault detection unit, wherein the act of sending comprises: sending the state data from the first interface to a data collection unit;	PDF's Exensio System sends the state data from the first interface to a fault detection unit, wherein the act of sending comprises sending the state data from the first interface to a data collection unit. For example, the Exensio System includes a centralized database as a data collection unit that receives the state data: "The Exensio database integrates, organizes, consolidates, aligns and tracks data from all process and testing data sources. This drives fast, efficient data analysis, correlation between data sources and drill-down to tool and test data. The database genealogy fully supports lot, wafer and die level traceability from wafer start to multi-chip packaged product." *See* PDF Solution's The Complete Semiconductor Data Platform, *available* at http://pdf.com/exensio-old (last visited Oct. 12, 2020). This centralized database can also be used as a data collection unit to store fault detection and classification data: "… Dedicated centralized database — Exensio –Control provides solutions fitted to FDC requirements. The entire fab's FDC data can be stored in one single location, enabling further analyses such as trend analysis or yield excursion root-cause analysis. … "

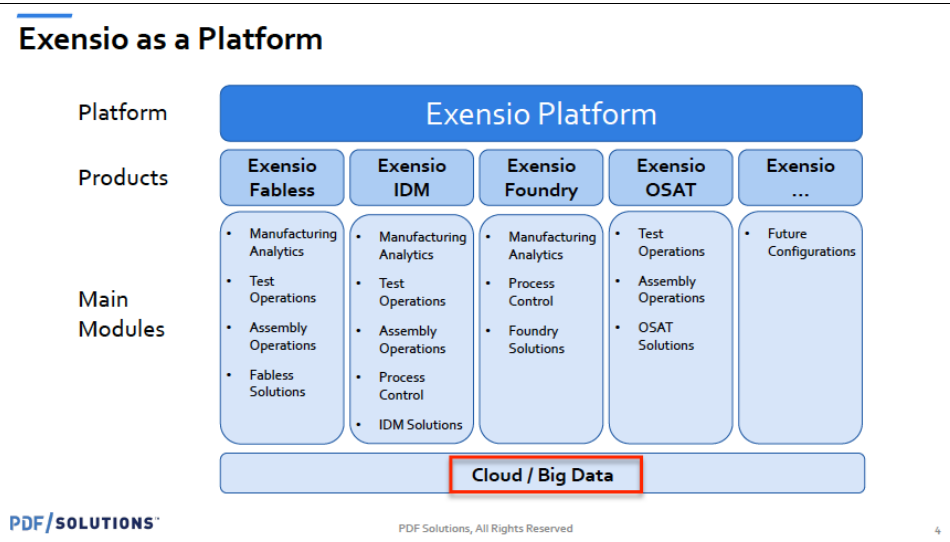
See Exensio Control, *available at* http://www.pdf.com/Exensio-Control (last visited Oct. 12, 2020):

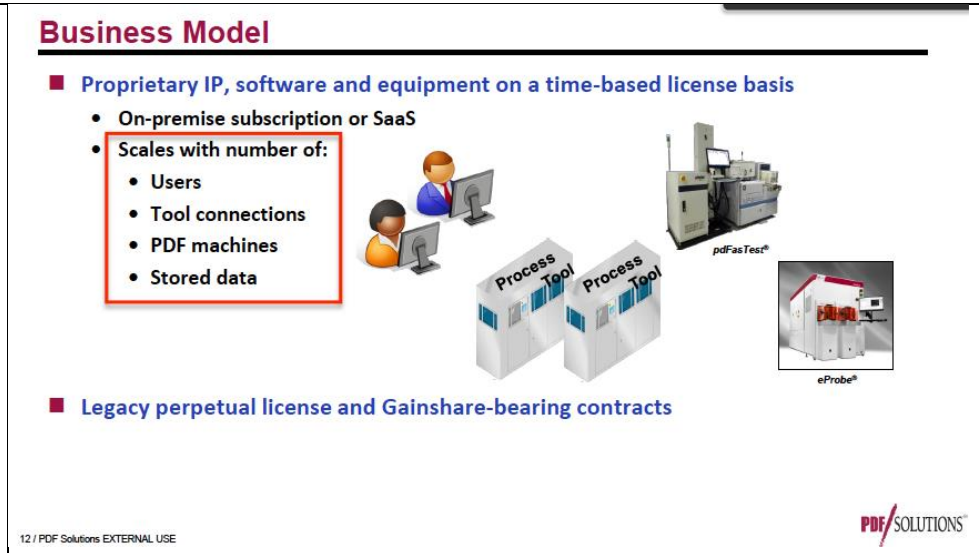
As another example, the Exensio System includes a "unified" database that receives the state data:



See Cognitive End to End Analytics Presentation at 9.

The data collection unit also can reside in Exensio's Design-for-Inspection ("DFI") system on the cloud:

	 *See* S1.2—Exensio Platform Presentation at 4 (annotated).
accumulating the state data at the data collection unit;	The Exensio System accumulates the state data at the data collection unit. For example, the state data can be accumulated at the Exensio database, the dedicated centralized database, or in a "cloud" database. *See above.* As another example, through on-premise subscription of Software-as-a-Service, the Exensio System accumulates the state data from users, tool connections, and PDF machines and store them on the accused system:



See Kibarian et al., PDF Solutions, Inc. Needham Growth Conference (Jan. 16, 2019) at 12, *available at* https://www.pdf.com/upload/File/Investors/INVPres2019/PDFS%20investor%20presentation%2016-Jan-2019%20(final).pdf (last visited Oct. 12, 2020) ("PDF Needham Conference Presentation").

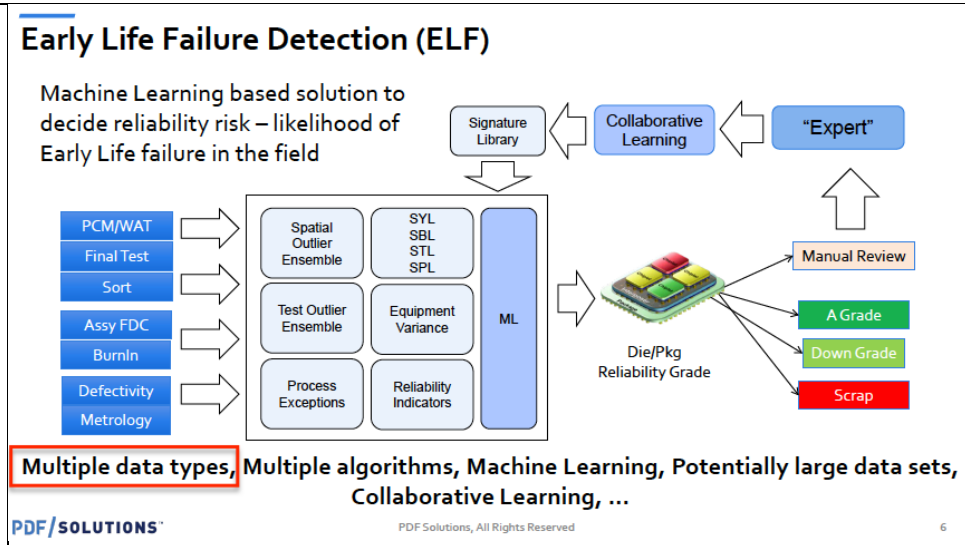
As another example, the state data can be accumulated at a dedicated centralized data configured to store FDC-related state data:

"Exensio –Control is a scalable Fault Detection and Classification (FDC) software solution that controls semiconductor manufacturing equipment and processes. Exensio-Control allows manufacturers to accurately detect and identify process or tool problems that arise during production, in real-time.
…

- Dedicated centralized database — Exensio –Control provides solutions fitted to FDC requirements. The entire fab's FDC data can be stored in one single location, enabling further analyses such as trend analysis or yield excursion root-cause analysis. …"

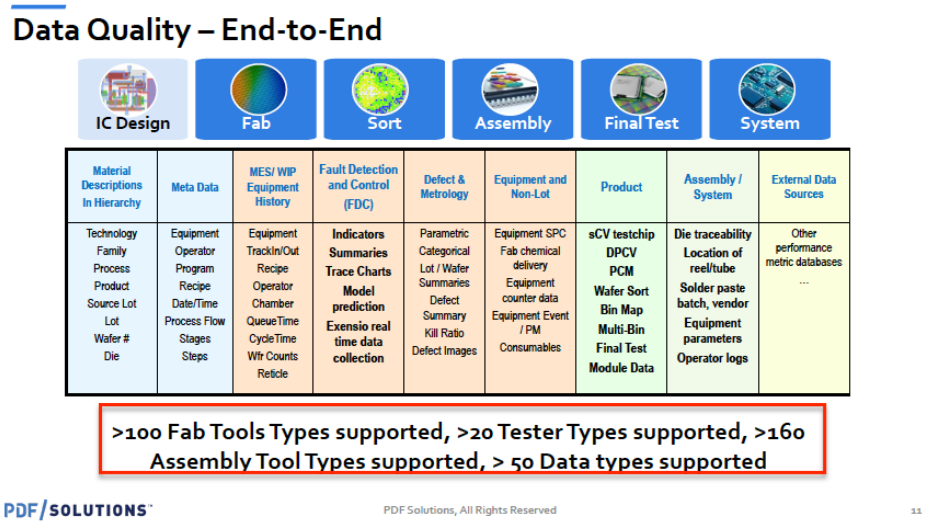
See Exensio Control, *available at* http://www.pdf.com/Exensio-Control (last visited Oct. 12, 2020).

translating the state data from a first communications protocol to a second communications protocol compatible with the fault detection unit;	PDF's Exensio System translates the state data from a first communications protocol to a second communications protocol compatible with the fault detection unit. As an example, the Exensio System translates the state data from a first communications protocol to a second communications protocol compatible with the fault detection unit as part of the "signal transformation and summarization process" such that it can acquires "all the equipment and logistics data for FDC analysis, in any format and from any source": "Exensio –Control is a scalable Fault Detection and Classification (FDC) software solution that controls semiconductor manufacturing equipment and processes. Exensio-Control allows manufacturers to accurately detect and identify process or tool problems that arise during production, in real-time. • Wide data acquisition capabilities — Exensio –Control acquires all the equipment and logistics data for FDC analysis, in any format and from any source (Interface A, databases, SECS/HSMS, automation, files, etc.) • Advanced analysis capabilities — Exensio –Control includes signal transformation and summarization, univariate SPC, multivariate fault detection and classification functions, plus meta-analysis based on indicators. In addition, Exensio –Control provides off-line and historical analysis capabilities to test FDC control strategies before deployment. • Real-time alarms and events management — Exensio –Control centralizes and assesses events and alarms to trigger the appropriate action. Equipment alarms and events are overlaid with trace and univariate SPC charts and can be analyzed in conjunction with FDC alarms. … " *See* Exensio Control, *available at* http://www.pdf.com/Exensio-Control (last visited Oct. 12, 2020). As another example, because the Exensio System accepts multiple data types and/or formats of the state data, it necessarily translates these data types from a first communications protocol to a second communications protocol compatible with the fault detection unit in order that the fault detection unit can read and understand the state data:



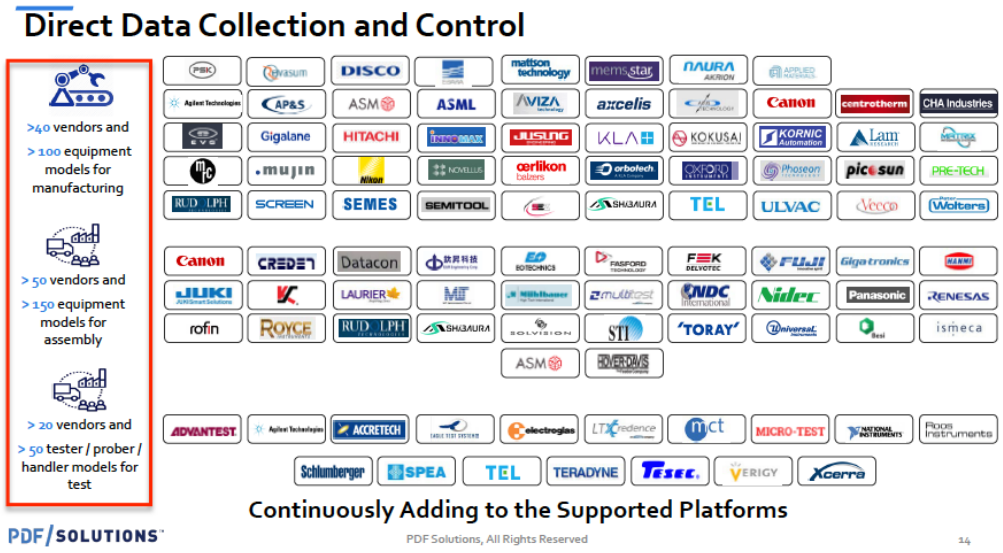
See S1.2—Exensio Platform Presentation at 6 (annotated).

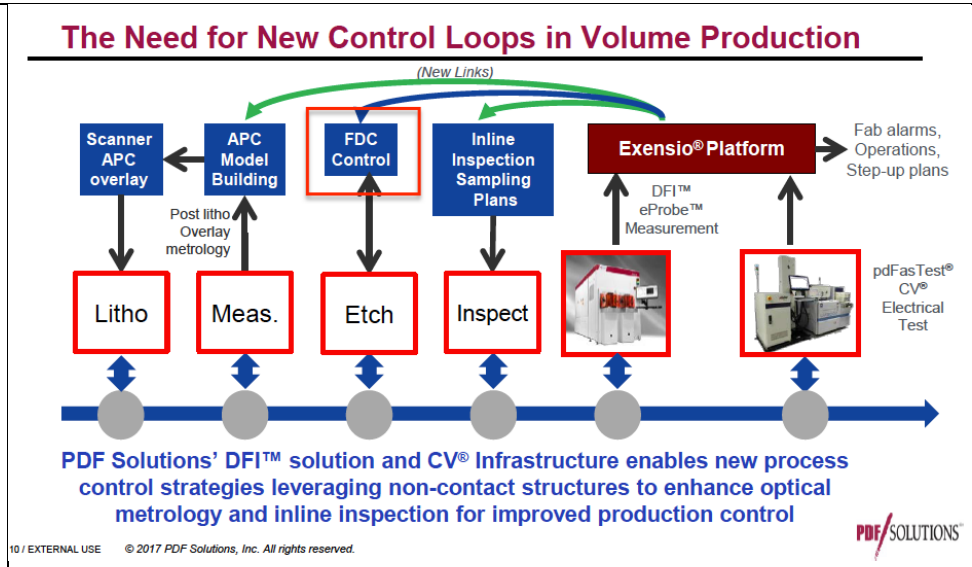
As another example, because the Exensio System supports state data from more than 100 fabrication tools, 20 testers, and 160 assembly tools and 50 data types, it necessarily translates such data from a first communications protocol to a second communications protocol compatible with the fault detection unit in order that the fault detection unit can read and understand the state data:



See S1.2—Exensio Platform Presentation at 11 (annotated).

As yet another example, because the Exensio System supports state data from more than 100 equipment models for manufacturing, 150 equipment models for assembly, and 50 testers, probers, and handler models for test, it necessarily translates such data from a first communications protocol to a second communications protocol compatible with the fault detection unit in order that the fault detection unit can read and understand the state data:

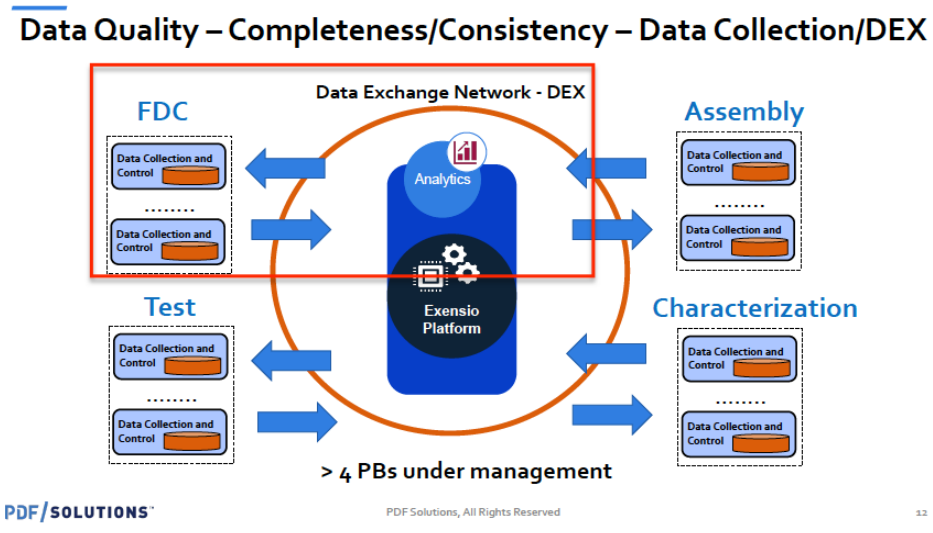
	 *See* S1.2—Exensio Platform Presentation at 14 (annotated).
and sending the translated state data from the data collection unit to the fault detection unit;	PDF's Exensio System sends the translated state data from the data collection unit to the fault detection unit. For example, the Exensio System sends the translated state data from the data collection unit to the FDC control unit:



See PDF Solutions Investor Presentation (Nov. 2017) at 10, *available at* http://www.pdf.com/upload/File/Investors/PDFInvestor%20Presentation%20November%202017.pdf (last visited Oct. 12, 2020) ("2017 Investor Presentation") (annotated).

As another example, the Exensio System sends the translated state data from the data collection unit to the fault detection unit via the AIM YieldAware FDC platform:

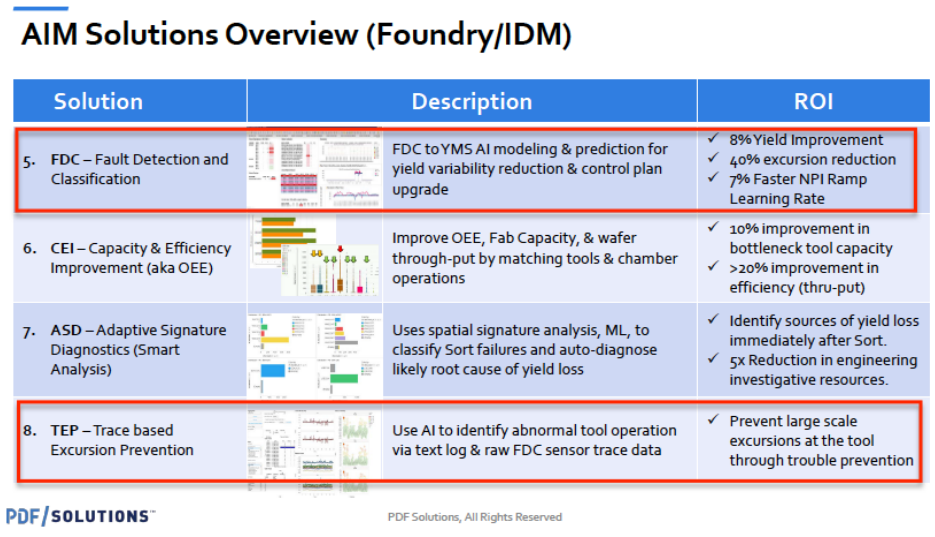
"Software Related Services – We provide software maintenance and support (or M&S), data management services, various value-added services (or VAS) to install, configure, or create analysis templates, and other professional services to achieve customers' specific outcomes using our software. We call this last type of services our AIM solutions and, in these cases, we tailor the user flows of one or more Exensio products to achieve a desired result. For example, our AIM YieldAware™ FDC offering is designed to identify the process control variables that have the greatest impact on product yield through professional services that analyze the data from both Exensio Control and elements of Exensio Yield and make recommendations for the customer to implement. VAS are provided by our professional service personnel with expertise that enhances and complements the engineering teams at our customers. For example, VAS includes our data cleaning and monitoring services. One requirement of big data analytics is to have clean, harmonized data to analyze. This service offering outsources the data wrangling and management effort to free the customer to focus their efforts on analysis, which has a greater ROI to the company than data management."

	See PDF Solutions Inc.'s Form 10-K (filed Mar. 10, 2020) at 8, *available at* http://ir.pdf.com/static-files/fb23407a-dfbc-489f-adb1-ac54e83102ad (last visited Oct. 12, 2020) ("2020 Form 10-K"). As another example, the Exensio System sends the translated state data from the data collection unit to the fault detection unit via the Data Exchange Network ("DEX"):  *See* S1.2—Exensio Platform Presentation at 12 (annotated).
determining if a fault condition exists with the processing tool based upon the state data received by the fault detection unit;	PDF's Exensio System determines if a fault condition exists with the processing tool based upon the state data received by the fault detection unit. As an example, the Exensio System is adapted to receive monitor and identify a fault condition covering various process parameters of the processing tool: "● Exensio Control – This software provides failure detection and classification (or FDC) capabilities for monitoring, alarming and control of manufacturing tool sets. These capabilities include proprietary data collection and analysis of tool sensor trace data and summary indicators designed to rapidly identify sources of process variations and manufacturing excursions. When used together with Exensio Yield and related modules, the accretive data mining and

correlation capabilities are designed to enable identification of tool level sources of yield loss and process variation that impact end of line product yield, performance and reliability."

See 2020 Form 10-K at 7.

As another example, the Exensio System determines if a fault condition exists with the processing tool based upon the state data received by the fault detection unit to improve yield and prevent large scale excursions at the tool:



AIM Solutions Overview (Foundry/IDM)

Solution	Description	ROI
5. **FDC** – Fault Detection and Classification	FDC to YMS AI modeling & prediction for yield variability reduction & control plan upgrade	✓ 8% Yield Improvement ✓ 40% excursion reduction ✓ 7% Faster NPI Ramp Learning Rate
6. **CEI** – Capacity & Efficiency Improvement (aka OEE)	Improve OEE, Fab Capacity, & wafer through-put by matching tools & chamber operations	✓ 10% improvement in bottleneck tool capacity ✓ >20% improvement in efficiency (thru-put)
7. **ASD** – Adaptive Signature Diagnostics (Smart Analysis)	Uses spatial signature analysis, ML, to classify Sort failures and auto-diagnose likely root cause of yield loss	✓ Identify sources of yield loss immediately after Sort. ✓ 5x Reduction in engineering investigative resources.
8. **TEP** – Trace based Excursion Prevention	Use AI to identify abnormal tool operation via text log & raw FDC sensor trace data	✓ Prevent large scale excursions at the tool through trouble prevention

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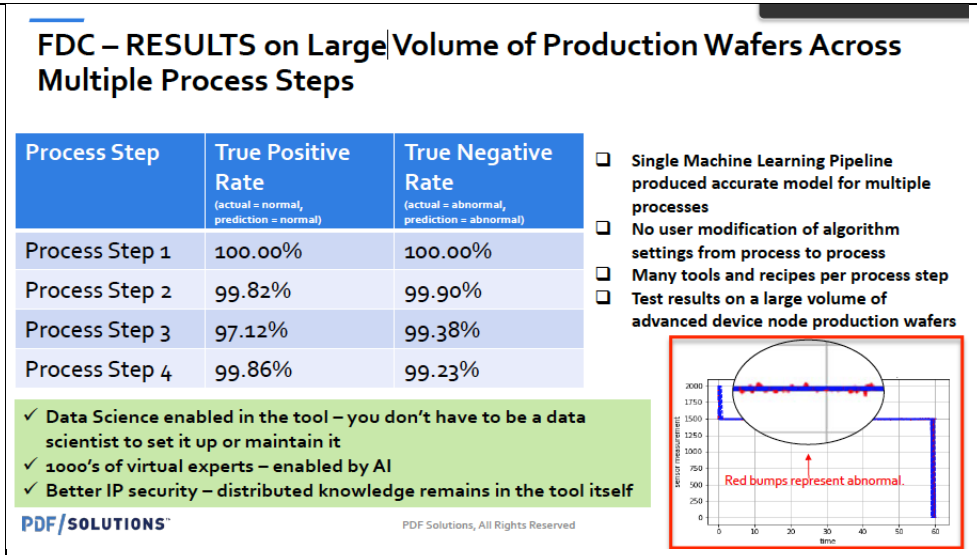
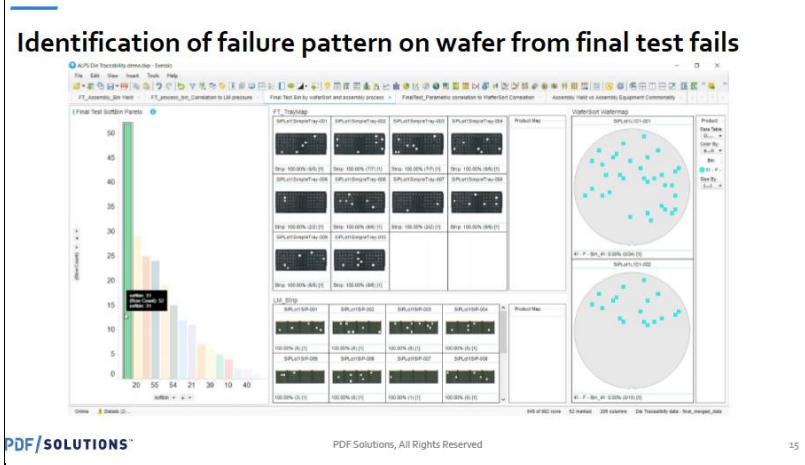
See S1.3— Machine Learning in Exensio, 16th Annual PDF Solutions Users Conference (Oct. 15, 2019) at 19, *available at* http://www.pdf.com/upload/File/Investors/PUG2019/S1.3%20PUG2019_AISolutions_JeffDavid.pdf ("S1.3—Machine Learning in Exensio") (last visited Oct. 12, 2020).

As another example, the Exensio System determines if a fault condition (e.g., whether a sensor detects abnormality) exists with the processing tool:

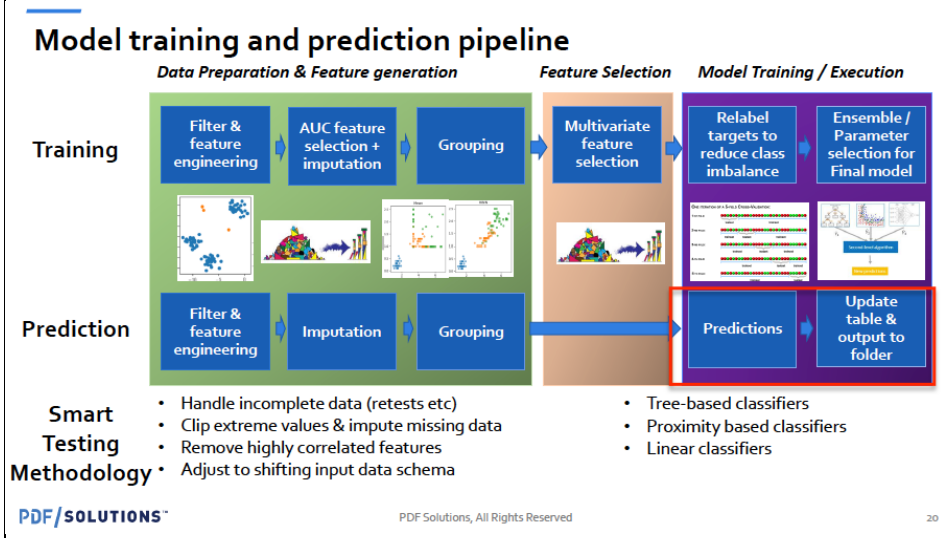


See S1.3—Machine Learning in Exensio at 23.

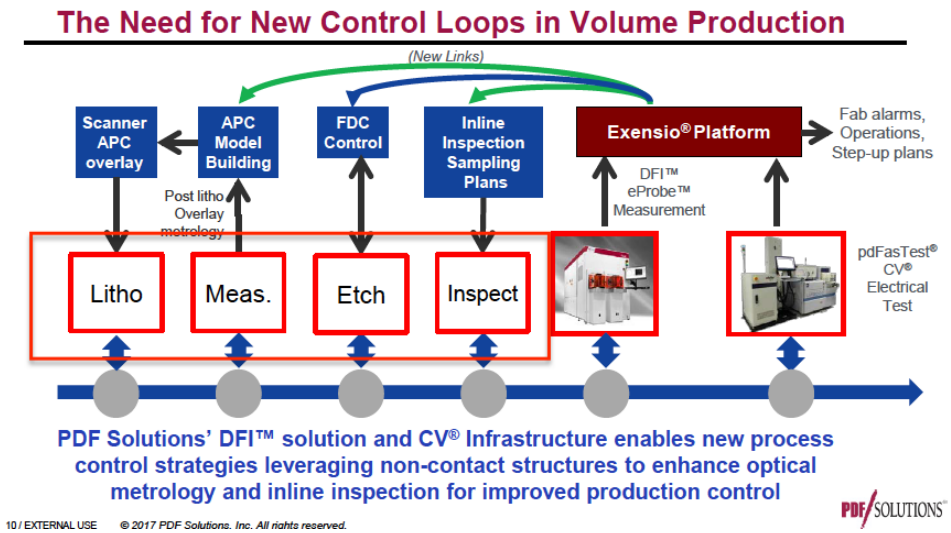
As another example, the Exensio System determines that a fault condition exists with the processing tool based on the failed patterns on the wafers:



See Cognitive End to End Analytics Presentation at 9.

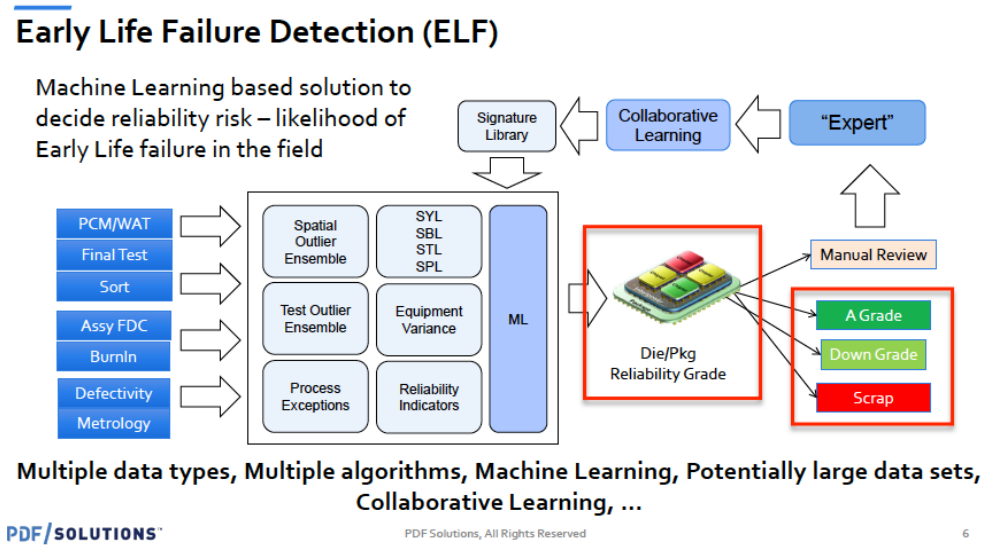
performing a predetermined action on the processing tool in response to the presence of a fault condition; and	PDF's Exensio System performs a predetermined action on the processing tool in response to the presence of a fault condition. As an example, the Exensio System is adapted to control the processing tools or manufacturing tool sets to take corrective actions in response to a fault condition: "● Exensio Control – This software provides failure detection and classification (or FDC) capabilities for monitoring, alarming and control of manufacturing tool sets. These capabilities include proprietary data collection and analysis of tool sensor trace data and summary indicators designed to rapidly identify sources of process variations and manufacturing excursions. When used together with Exensio Yield and related modules, the accretive data mining and correlation capabilities are designed to enable identification of tool level sources of yield loss and process variation that impact end of line product yield, performance and reliability." *See* 2020 Form 10-K at 7. As another example, the Exensio System adjusts processing of the processing tool by updating recipe tables and processing/tool parameters in response to the presence of a fault condition:  *See* Cognitive End to End Analytics Presentation at 20 (annotated).

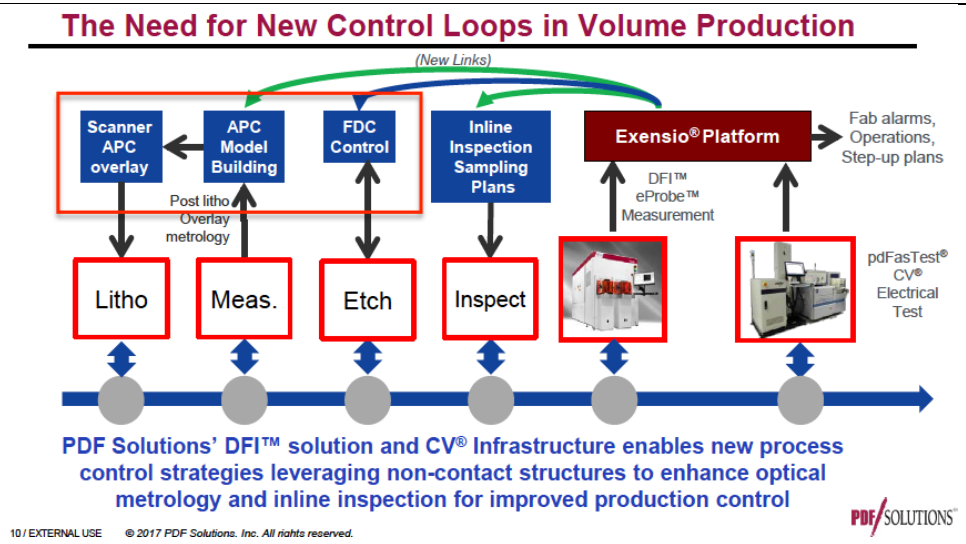
As another example, the Exensio System adjusts the lithography, measurement, etching, or inspection parameters of the processing tool:

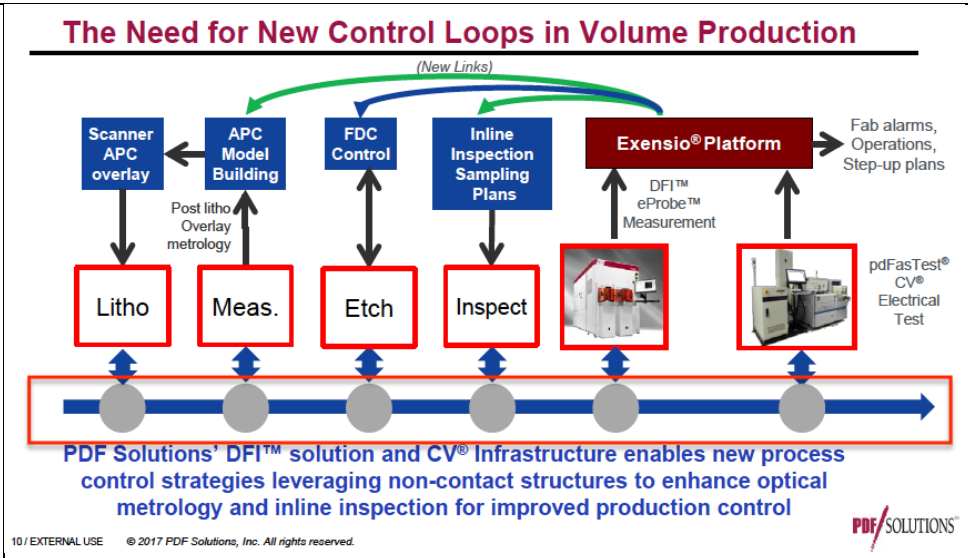


See 2017 Investor Presentation at 10 (annotated).

As another example, the Exensio System controls the processing tool to downgrade or scrape the die/package that contains the fault condition:

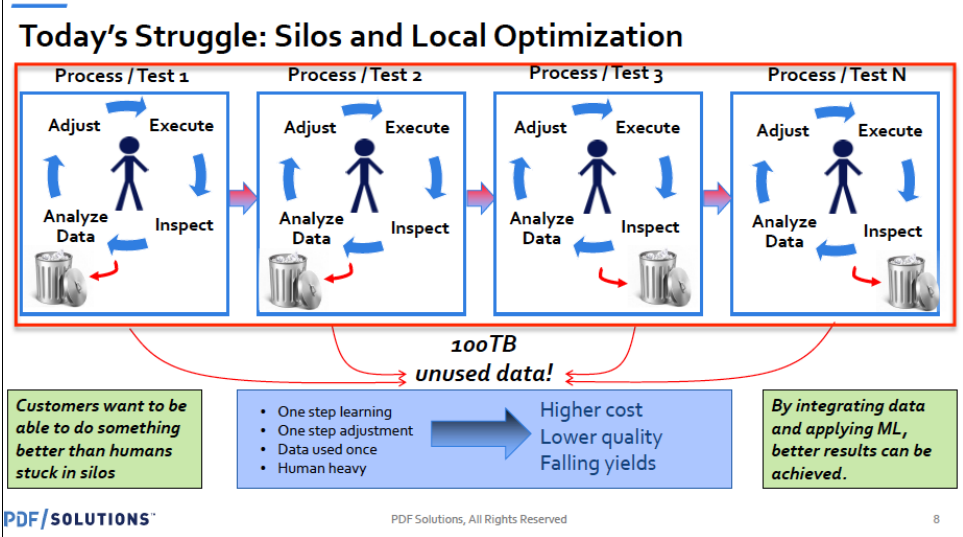
	 *See* S1.2—Exensio Platform Presentation at 6 (annotated).
sending an alarm signal indicative of the fault condition to an advanced process control framework from the fault detection unit providing that a fault condition of the processing tool was determined by the fault detection unit,	PDF's Exensio System sends an alarm signal indicative of the fault condition to an advanced process control framework from the fault detection unit providing that a fault condition of the processing tool was determined by the fault detection unit. As an example, the Exensio System sends an alarm signal indicative of the fault condition to the APC framework: "… Real-time alarms and events management — Exensio –Control centralizes and assesses events and alarms to trigger the appropriate action. Equipment alarms and events are overlaid with trace and univariate SPC charts and can be analyzed in conjunction with FDC alarms. …" *See* Exensio Control, *available at* http://www.pdf.com/Exensio-Control (last visited Oct. 12, 2020): As another example, the Exensio System sends an alarm signal indicative of the fault condition to the APC framework responsible for APC model building and APC overlay:

	 *See* 2017 Investor Presentation at 10 (annotated).
wherein performing a predetermined action further comprises sending a signal by the framework to the first interface reflective of the predetermined action.	PDF's Exensio System sends a signal by the framework to the first interface reflective of the predetermined action. As an example, the Exensio System sends a signal by the framework to the first interface reflective of the predetermined action as part of a feedback system in order to update its database and continue monitoring the processing pipeline to improve product and process control:



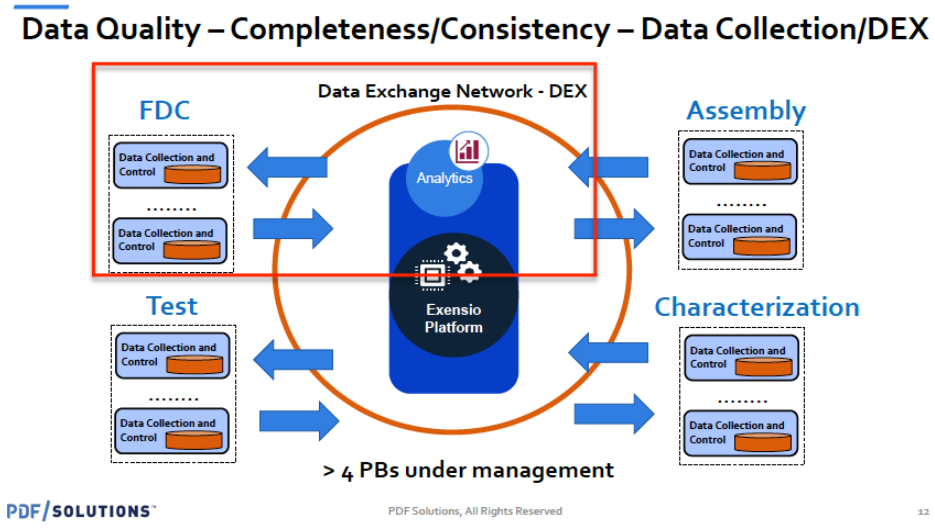
See 2017 Investor Presentation at 10 (annotated).

As another example, the Exensio System sends a signal by the framework to the first interface reflective of the predetermined action as part of the "inspect-analyze data-adjust-execute" methodology to continually identify and resolve manufacturing issues:



See Cognitive End to End Analytics Presentation at 8.

As another example, the Exensio System a signal by the framework to the first interface reflective of the predetermined action via the Data Exchange Network ("DEX"):



See S1.2—Exensio Platform Presentation at 12 (annotated).